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SPACE GATEWAY SUPPORT (SGS) **SGS-08 87 15.00 99 (November 2006)**

Preparing Activity: SGS-DE **Superseding**
SGS-08 85 00.00 99 (April 2006)
SGS-08860J (February 2005)

SGS GUIDE SPECIFICATIONS

References are NOT in Agreement with UMRL dated 09 October 2006

Revised throughout - changes not indicated by CHG tags
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SOLAR CONTROL SAFETY FILM

11/06

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SECTION 08 87 15.00 99

SOLAR CONTROL SAFETY FILM
11/06

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NOTE: This guide specification covers the requirements for transparent film at least 0.10 mm (0.004 inch thick (4 mil)) applied to the interior side of glass to reduce solar heat gain, spalling, and fragment dispersal.

Brackets are used in the text to indicate designer choices or locations where text must be supplied by the designer.
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PART 1 GENERAL

1.1 SUBMITTALS

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NOTE: Review submittal description (SD) definitions in Section 01 33 00 SUBMITTALS and edit the following list to reflect only the submittals required for the project. Keep submittals to the minimum required for adequate quality control. Include a columnar list of appropriate products and tests beneath each submittal description.

A "G" following a submittal item indicates that the submittal requires Government approval. Some submittals are already marked with a "G". Only delete an existing "G" if the submittal item is not complex and can be reviewed through the Contractor's Quality Control system. Only add a "G" if the submittal is sufficiently important or complex in context of the project.

For submittals requiring Government approval on Army projects, a code of up to three characters within the submittal tags may be used following the "G" designation to indicate the approving authority. Codes for Army projects using the Resident

Management System (RMS) are: "AE" for Architect-Engineer; "DO" for District Office (Engineering Division or other organization in the District Office); "AO" for Area Office; "RO" for Resident Office; and "PO" for Project Office. Codes following the "G" typically are not used for Navy, Air Force, and NASA projects.

Submittal items not designated with a "G" are considered as being for information only for Army projects and for Contractor Quality Control approval for Navy, Air Force, and NASA projects.

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Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES in sufficient detail to show full compliance with the specification:

SD-03 Product Data

Three copies of manufacturer's catalog data

SD-04 Samples

Prior to delivery of materials, submit to the Contracting Officer duplicate set of the various film types specified, not less than 8 x 10 inches, and three copies of manufacturer's catalog data

1.2 PRECONSTRUCTION REQUIREMENTS AND GUARANTEE

Prior to commencement of construction, submit the following for review and approval:

catalog data (three copies)
film types (samples)

Provide Manufacturer's written guarantee of professionally installed film with pressure-sensitive adhesives against peeling, cracking, crazing, loosening, fading and discoloring for 5 years.

1.3 TEST REPORTS

Provide manufacturer's notarized certification that materials to be supplied comply with the specifications listed, except as otherwise indicated. Submit test reports available from the manufacturer's laboratory or from an accredited independent testing laboratory with the required film types and catalog data for approval.

PART 2 PRODUCTS

2.1 REFLECTIVE WINDOW FILM

Transparent film; polyester, vacuum coated with aluminum or other metal; 0.0009 to 0.0011 inch thickness (plus adhesive thickness); and light, neutral gray, not affecting color values in the room. Tinted film; transparent, colored film, laminated to the metallic surface, approximately 0.005 inch thick. Film as manufactured by Solar-X Corporation, Type PS-80, or approved equal with the following characteristics:

Density variation, the average of light transmission across the width at all positions along the length not to exceed ± 1%.

Variation in total transmission across the width at any portion along the length not to exceed ±2% over the average.

Range of change of total transmission across the width at any portion along the length not to exceed 1% in 4 inches.

Transparent reflective window film on clear glass displaying a shading coefficient of not greater than 0.25 visible light transmission of 15% or greater, and solar reflectance of 50% or greater.

Film using pressure-sensitive adhesives when applied to glass and mounted in a frame, meeting the break safe specifications for safety glazing as established by ANSI A97.1

Reflective window film applied to 1/8 inch clear glass having a U-value of 0.84.

Nonflammable on glass, melting point of 480° to 500° F, and does not release noxious fumes when burned or melted.

2.2 ADHESIVE

Factory-applied, pressure-sensitive systems. Keep optically flat prior to application by a protective polyester film that is removed and discarded. Pressure-sensitive surfaces must meet the following requirements for vision, moisture resistance and weathering:

The view from a distance of 5 feet, at angles up to 45° from either side of the glass, must not be distorted by the adhesive-film combination.

Sealing with a lacquer or other substance around the edges of the film is not necessary to prevent condensed moisture or free water from penetrating under the film.

Adhesive must be resistant to ultraviolet degradation or discoloring.

Adhesion, under normal conditions of sunlight, humidity and extremes of temperatures, must be retained beyond the period of the warranty.

PART 3 EXECUTION

3.1 INSTALLATION

Apply film in such a manner that provides a uniform appearance with no streaks, banding, pin holes or thin spots with very thin, uniformly trimmed margins.

Install reflective window film in accordance with manufacturer's instructions, using authorized installers trained in this particular type of film installation.

Fit and/or seam film accurately and bond securely to glass surface. Cut film edges neatly and square coming to within 1/16 inch of the edges of the exposed glass. Upon installation, the film must be an integral part of the glass, free of bubbles, creases or marks visible at normal viewing

distances.

-- End of Section --